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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,935	06/20/2003	Masud Mansuripur	UA 02-023	6190
27667 7590 04/09/2009 HAYES SOLOWAY P.C. 3450 E. SUNRISE DRIVE, SUITE 140 TUCSON, AZ 85718			EXAMINER BRUSCA, JOHN S	
			ART UNIT	PAPER NUMBER
			1631	
			MAIL DATE	DELIVERY MODE
			04/09/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/600,935

Applicant(s)

MANSURIPUR ET AL.

Examiner

John S. Brusca

Art Unit

1631

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 04 March 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: none.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1-4, 6-27, 29-39 and 64-71.  
Claim(s) withdrawn from consideration: 5, 28, 40-63 and 72-80.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☒ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

/John S. Brusca/  
Primary Examiner, Art Unit 1631

Continuation of 3. NOTE: The proposed amendment to claim 30 raises new issues regarding the meaning of the insertion of "has been written located" which appears to contain a grammatical error..

/John S. Brusca/  
Primary Examiner Art Unit 1631

Continuation of 11. does NOT place the application in condition for allowance because: The Gibbs reference accompanying the amendment filed 04 March 2009 has not been entered or considered as noted above. The applicants state that binary data may be stored on a collection of bases. The applicants have not pointed to an enabling description of storing a binary datum on a collection of bases greater than 2 bases. The specification provides guidance to use single bases or pairs of bases to store a datum on page 10 and figures 8A and 8B. The applicants state that error correction methods enable the claimed methods, but the specification does not indicate what levels of errors would occur or if the level of error can be addressed by error correction methods. The applicants state that the amount of time required to perform the processes executed by the claimed apparatus is irrelevant, however the quantity of experimentation is a factor to be considered in assessing whether undue experimentation is required to use the claimed invention. The applicants have not provided evidence that the amount of experimentation required results in a practical invention. The applicants have not provided evidence that a polymerase molecule can add single molecules with accuracy as described in the specification and required to use the claimed apparatus. The applicants merely assert without evidence that error correction techniques enable the claimed apparatus. and that tethered enzymes work at lower concentrations than unattached enzymes. The applicants state that single base resolution is unnecessary to resolve individual binary datum, but the specification only provides guidance to use one or two bases to encode a binary datum. The applicants state that Rhee et al. does not show that nanopore sequencing is not possible, but Rhee et al. shows that nanopore sequencing was not achieved four years after the effective filing date of the instant application. The applicants assert without evidence that argon ions may be used as nanopores to perform nanopore sequencing. Regarding the rejection over Legally et al. under 35 U.S.C. 103(a) the applicants state that a DNA sequence does not contain binary data unless it was assigned a binary value. To the extent the applicant's arguments are based on entry of the amendment filed 04 March 2009 the arguments are unpersuasive in view of the nonentry of the amendment. The limitation in claim 30 that the molecular material comprises binary data is an inherent property of DNA sequences in DNA molecules. The claimed subject matter of claim 30 is an apparatus comprising a molecule, and the claimed subject matter does not require a process of encoding particular data in a molecule. .